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TOWNSEND AND TOWNSEND AND CREW, LLP/PIXAR
TWO EMBARCADERO CENTER
EIGHTH FLOOR
SAN FRANCISCO, CA 94111-3834

EXAMINER	
YANG, ANDREW GUS	
ART UNIT	**PAPER NUMBER**
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/810,487	PEACHEY, DARWYN	
	Examiner	Art Unit	
	Andrew Yang	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 October 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3, 6-11, 14-17, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oka (U.S. Patent No. 7,102,639) in view of Brunelle (U.S. Patent No. 5,999,194)

With respect to claim 1, Oka discloses a method for rendering a frame of animation in a computer system having a computer memory, the method comprising: receiving scene descriptor data associated with the frame of animation, wherein the scene descriptor data includes a first specification of at least one object, (displaylist, column 8, lines 65-67, column 9, lines 1-6, and wherein the scene descriptor data includes a second specification of the at least one object (LOD used, column 9, lines 4-6), receiving a selection of a first rendering option or a second rendering option (column 10, lines 61-67, column 11, lines 25-38). The first specification of the object is low detail, the first rendering option is for LOD(1), and the second rendering option is for LOD(0). Oka discloses transferring three-dimensional graphic data of LOD(1) from a memory external to the GPU (column 12, lines 60-64), therefore receiving the first representation of the object from data external to the computer system (GPU) and loading the first representation into frame memory (column 12, lines 64-65). The GPU 18 in Fig. 1

conducts the rendering the object (based on the displaylist) for the frame of animation using the first representation of the object when the selection is of the first rendering option; wherein the first representation of the object is not loaded into the frame memory when the selection is of the second rendering option (column 12, lines 58-67). The first representation of the object is not loaded into the frame memory when the selection is of the second rendering option, or when object is lower than a given speed because the second representation is loaded into frame memory. It is noted that Oka does not explicitly teach querying a database to receive a first specification of an object. OFFICIAL NOTICE is taken that database queries are well known in the art; therefore it would have been obvious to query a database for a first representation of the one object in response to the first specification of the object when the selection is of the first rendering option because this would allow for obtaining necessary details for rendering the first representation of the object. However, Oka does not expressly disclose the first specification is associated with a first user-defined purpose and the second specification is associated with a second user-defined purpose for rendering the frame of animation and that the first and second rendering options have corresponding user-defined purposes.

Brunelle, who also deals with rendering objects, discloses a method wherein an animator can render a scene as a wireframe preview or a low resolution rough version with corresponding user-defined purposes of previewing the animation to check the timing, layout, and motion over which the defined control lines and spotting major flaws in the positioning of the control points 58, control lines 60, lines of motion, as well as

timing and positioning errors which cannot be seen in the " wireframe" preview, respectively (column 10, lines 9-36).

Oka and Brunelle are in the same field of endeavor, namely rendering computer graphics.

At the time of the invention, it would have been obvious to one skilled in the art to combine the method of Brunelle wherein a first specification is associated with a first user-defined purpose and the second specification is associated with a second user-defined purpose for rendering the frame of animation and the first and second rendering options have corresponding user-defined purposes because this would allow a user to preview an animation much faster than the high resolution final print (column 10, lines 30-32 of Brunelle).

With respect to claim 2, Oka et al. disclose the method of claim 1. The second specification of the object is high detail and the second rendering option is for LOD(0). Oka discloses transferring three-dimensional graphic data of LOD(0) from a auxiliary storage device external to the GPU (column 12, lines 60-64), therefore receiving the second representation of the object from data external to the computer system (GPU) and loading the second representation into frame memory (column 12, lines 64-65). The GPU 18 in Fig. 1 conducts the rendering the object (based on the displaylist) for the frame of animation using the second representation of the object when the selection is of the second rendering option; wherein the second representation of the object is not loaded into the frame memory when the selection is of the first rendering option (column 12, lines 58-67). The second representation of the object is not loaded into the frame

memory when the selection is of the first rendering option, or when object is faster than a given speed because the first representation is loaded into frame memory. It is noted that Oka does not explicitly teach querying a database to receive a first specification of an object. OFFICIAL NOTICE is taken that database queries are well known in the art; therefore it would have been obvious to query a database for a second representation of the one object in response to the second specification of the object when the selection is of the second rendering option because this would allow for obtaining necessary details for rendering the second representation of the object.

With respect to claim 3, Oka discloses the method of claim 1, wherein the one object comprises a geometric object (column 8, lines 65-67). The first representation of the object comprises a geometric description of the geometric object (column 9, lines 1-6).

With respect to claim 6, Oka discloses the method as in claim 1. However, Oka does not explicitly teach providing an asset management system for the first specification of the object and receiving a location of the first representation of the one object from the system. OFFICIAL NOTICE is taken that asset management systems are well known in the art for retrieving data; therefore it would have been obvious to provide an asset management system for the first specification of the object and receive a location of the first representation of the one object from the system because this would allow for obtaining the first representation of the object from the system.

With respect to claim 7, Oka discloses the method of claim 1, further comprising: storing the frame of animation (column 12, lines 64-65); and displaying the frame of animation (column 13, lines 1-3).

With respect to claim 8, Oka disclose a method for rendering a frame of animation in a computer system having a computer memory, the method comprising: retrieving scene descriptor data associated with the frame of animation (displaylist, column 12, lines 39-40), wherein the scene descriptor data specifies at least one object (column 8, lines 65-67), wherein the object is associated with a reference to a first representation of the object (column 9, lines 1-6). The displaylist specifies at least one object by three dimensional graphic data, the object is associated with a first reference to the object (LOD(1)), and a reference to a second representation of the object (LOD(0)). Oka discloses steps of receiving a selection of the first rendering option or a second rendering option, querying a database, receiving the first representation of the object, loading the first representation, and rendering the object, wherein the first representation is not loaded into the computer memory as in claim 1; see rationale for rejection of claim 1. The first representation of the object comprises references to the representations of a first plurality of objects (the LOD level and designations of positions, column 9, lines 2-6); the second representation of the object comprises references to representations of a second plurality of objects (another LOD level and designations of positions, column 9, lines 2-6). The house object in Fig. 3 contains at least one object (window of house) within the first plurality of objects, which is also within the second plurality of objects (walls and roof structure of house). However, Oka

does not expressly disclose the first specification is associated with a first user-defined purpose and the second specification is associated with a second user-defined purpose for rendering the frame of animation and that the first and second rendering options have corresponding user-defined purposes.

Brunelle, who also deals with rendering objects, discloses a method wherein an animator can render a scene as a wireframe preview or a low resolution rough version with corresponding user-defined purposes of previewing the animation to check the timing, layout, and motion over which the defined control lines and spotting major flaws in the positioning of the control points 58, control lines 60, lines of motion, as well as timing and positioning errors which cannot be seen in the " wireframe" preview, respectively (column 10, lines 9-36).

Oka and Brunelle are in the same field of endeavor, namely rendering computer graphics.

At the time of the invention, it would have been obvious to one skilled in the art to combine the method of Brunelle wherein a first specification is associated with a first user-defined purpose and the second specification is associated with a second user-defined purpose for rendering the frame of animation and the first and second rendering options have corresponding user-defined purposes because this would allow a user to preview an animation much faster than the high resolution final print (column 10, lines 30-32 of Brunelle).

With respect to claim 9, Oka discloses the method of claim 8, wherein loading the first representation of the object into the computer memory when the selection is of the

first rendering option comprises loading representations of the first plurality of objects into the computer memory when the selection is of the first rendering option (column 12, lines 60-65). The first representation (low level detail, LOD(0)) is loaded into frame memory when the selection is of the first rendering option, as determined by the speed of the object (column 10, lines 61-67).

With respect to claim 10, Oka discloses the method as in claim 9 comprising identical steps of claim 2; see rationale for rejection of claim 2.

With respect to claim 11, Oka discloses the method as in claim 9 identical to claim 3; see rationale for rejection of claim 3.

With respect to claim 14, Oka discloses a computer program product for a computer system including a processor and a program memory (column 8, lines 26-36, lines 47-50), the computer product comprising code that directs the processor to execute the method of claims 1-2 (column 8, lines 44-57); see rationale for rejection of claims 1-2. The codes reside on tangible media (column 8, lines 48-49).

With respect to claim 15, Oka discloses the computer program product as in claim 14 that implements the method of claim 9; see rationale for rejection of claim 9.

With respect to claim 16, Oka discloses the computer program product as in claim 15 that implements loading and rendering steps of claim 2; see rationale for rejection of claim 2.

With respect to claim 17, Oka discloses the computer program product as in claim 16 that implements the method of claim 3; see rationale for rejection of claim 3.

With respect to claim 20, Oka discloses the computer program product as in claim 16, wherein the first representation of the object further comprises values for properties of objects in the first plurality of objects (column 9, liens 1-6), the properties being designations of positions, colors, texture coordinates.

With respect to claim 21, Oka discloses the method of claim 3, wherein the geometric description of the geometric object includes a plurality of geometric parameters (column 8, lines 50-57); and wherein the scene descriptor data includes values for the plurality of geometric parameters (column 8, lines 65-67, column 9, lines 1-6).

Claims 4,12, 18, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oka (U.S. Patent No. 7,102,639) in view of Harvill et al. (U.S. Patent No. 6,559,845).

With respect to claim 4 Oka discloses the method as in claim 1. However, Oka does not disclose a camera object wherein the first representation of the camera object comprises: camera field of view, camera position, camera orientation, and camera aspect ratio.

Harvill et al., who also deal with scene animation, disclose a method with an object hierarchy in Fig. 3, including a camera object 148 for storing information about camera position and angle with respect to an object model (column 8, lines 45-47).

Oka and Harvill et al. are analogous in that they are in the same field of endeavor, namely computer graphics animation.

At the time of the invention, it would have been obvious to combine the method of including a camera object with attributes as taught by Harvill et al. with the Oka reference for the benefit of providing viewpoint attributes necessary for defining the scene.

With respect to claim 12, Oka discloses the method of claim 9 as in claim 4; see rationale for rejection of identical claim 4.

With respect to claim 18, Oka discloses the computer program product of claim 16 that implements the method of claim 4; see rationale for rejection of claim 4.

With respect to claim 22, Oka discloses the method of claim 4. It is noted that Oka does not explicitly teach the first representation of the camera object includes a plurality of camera parameters; and wherein the scene descriptor data includes values for the plurality of camera parameters. However, Oka discloses geometric object parameters (column 8, lines 50-57) and the scene descriptor data includes values for the plurality of geometric parameters (column 8, lines 65-67, column 9, lines 1-6). OFFICIAL NOTICE is taken that a camera can be an object in a scene; therefore it would have been obvious to include camera parameters and values for the camera parameters in the scene descriptor data because this would allow for managing a camera object.

Claims 5, 13, 19, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oka (U.S. Patent No. 7,102,639) in view of Gagne (U.S. Patent No. 6,353,437).

With respect to claim 5, Oka discloses the method as in claim 1. However, Oka does not disclose a light object wherein the first representation of the light object comprises: type of light source, light color, light source, light quality, and light shape.

Gagne, who also deals with scene animation, discloses a method wherein light object 98a in Figs. 4, 5, and 6, applies a highlight property to a scene represented by frames 120a, 120b, and 120c, in Figs. 4, 5, and 6, respectively (column 7, lines 12-13, 16, and 19-21), thus describing a light source and light quality.

Oka and Gagne are analogous in that they are in the same field of endeavor, namely computer graphics animation.

At the time of the invention, it would have been obvious to combine the method of including a light object with attributes as taught by Gagne with the Oka reference for the benefit of providing light attributes necessary for illuminating the scene.

With respect to claim 13, Oka disclose the method of claim 9 as in claim 5; see rationale for rejection of identical claim 5.

With respect to claim 19, Oka discloses the computer program product as in claim 16 that implements the method of claim 5; see rationale for rejection of claim 5.

With respect to claim 23, Oka discloses the method of claim 5. It is noted that Oka does not explicitly teach the first representation of the light object includes a plurality of light parameters; and wherein the scene descriptor data includes values for the plurality of light parameters. However, Oka discloses geometric object parameters (column 8, lines 50-57) and the scene descriptor data includes values for the plurality of geometric parameters (column 8, lines 65-67, column 9, lines 1-6). OFFICIAL NOTICE is taken

that a light can be an object in a scene; therefore it would have been obvious to include camera parameters and values for the camera parameters in the scene descriptor data because this would allow for managing a light object.

Response to Arguments

Applicant's arguments with respect to claims, 1, 8, and 14 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Yang whose telephone number is (571) 272-5514. The examiner can normally be reached on 8:30-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Zimmerman can be reached on (571) 272-7653. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AGY

1/22/08

MARK ZIMMERMAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600